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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,812	07/19/2004	Werner Helms	016909-0320	4934
22428 7590 04/19/2007 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER HARMON, CHRISTOPHER R	
			ART UNIT 3721	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/501,812	Applicant(s) HELMS ET AL.	
	Examiner Christopher R. Harmon	Art Unit 3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-14, 16-23 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-14, 16-23 and 25-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The amendment to the drawings was received on 2/12/07. These drawings are accepted.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 14 and 26-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed range for the thickness d and the breadth of the brazed connection are not sufficiently described in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is uncertain what is "within its normal tolerance" of the web.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10-14, 19-21, 23, 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jean Louis (FR#2780153) in view of Applicant's Admitted Prior Art (AAPA).

Jean Louis show a multi-chamber tube which is manufactured from a flat strip with two longitudinal faces 12, 14, two curved narrow faces 16, 18, at least one web which is folded out and which divides adjacent chambers which is soldered to the inner wall 14 with an embossment 34. As best understood, Jean Louis does not show a longitudinal seam as claimed. However the previously made common knowledge modification, ie. provision of a longitudinal seam, (see Non-Final Rejection of 8/18/05) is taken to be admitted prior art because applicant failed to traverse the examiner's assertion of official notice.

Regarding claims 11-14, the manner of the embossment in the web is considered a plateau; see figures 1 and 3, the dimensions of which (embossment, web thickness, and tube breadth) are obvious to one of ordinary skill in the art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 22, the invention to Jean Louis is formed of at least one web (flat); the distal ends 20, 22 moved into abutment with the embossment 34 and is considered standardized (note opposing walls are distinctly described as parallel); see figure 3, English abstract.

Regarding claim 23, figure 4 of Jean Louis depicts a heat exchanger assembly comprising heat exchange fins 40 and flat multi-chambered tubes of figure 1. It is uncertain whether or not the tubes and fins are braze-connected or corrugated, however because brazing corrugated fins is admitted as well known in the art as a form of connecting, (spec. page 6, lines 7+) it would have been obvious to one of ordinary skill in the art to braze the elements (corrugated or otherwise) together for the final assembly completion.

8. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jean Louis (FR#2780153) in view of Letrange (US 5,704,423).

Jean Louis does not directly disclose a first and second web, however Letrange teaches a flat tube for a heat exchanger utilizing first 12 and second webs 14. It would have been obvious to one of ordinary skill in the art to include a first and second web as taught by Letrange in the invention to Jean Louis in order to create a flat multi-chambered tube with additional chambers.

Response to Arguments

9. Applicant's arguments filed 2/12/07 have been fully considered but they are not persuasive. Claim 10 fails the three prong test as set forth in MPEP 2181 (means is

further modified) and therefore is not in proper "means plus function" form. Accordingly, treatment under 35 USC 112(6) has not been applied.

The shape of the embossment of Jean Louis is considered a plateau not merely a triangular shape as applicant argues; see figure 3. Furthermore, the argument that the embossment is not "deformable" is not clear. "deformable" is given its ordinary and plain meaning. The grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. While features of an apparatus may be recited either structurally or functionally, claims directed towards an apparatus must be distinguished from the prior art in terms of structure rather than function. See *In re Schreiber*, 128 F.3d 1473-78, 44 USPQ2d 1429-32 (Fed.Cir. 1997) and *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed.Cir. 1990).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., functionality of embossment, intended use) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

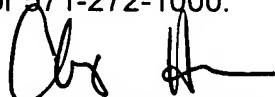
§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Harmon whose telephone number is (571) 272-4461. The examiner can normally be reached on Monday-Friday from 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Chris Harmon', is positioned above the printed name.

Christopher R Harmon
Primary Examiner
Art Unit 3721

Title: MULTI-CHAMBER FLAT
TUBE

Inventor(s): Werner HELMS et al.

Appl. No.: 10/501,812

New Drawing Sheet

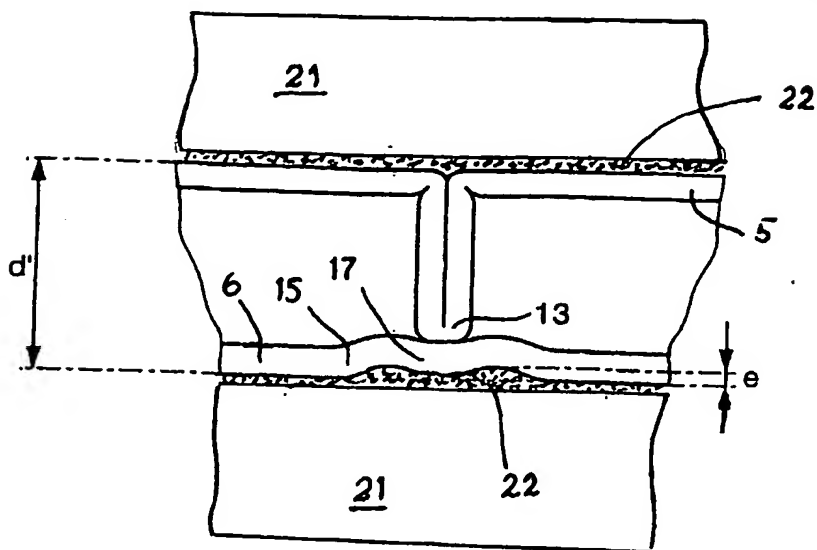
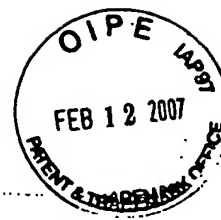


Fig. 4

4/9/07

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